WATER UTILITY ENTERPRISE

REPORT

FINAL

August 1998

August 1998

Board of Directors:

This report, Water Utility Enterprise Report, Final August 1998 summarizes the results of the water rate hearings held in April and May 1998 and revises the financial and water supply information included in the preliminary report submitted in April. It includes the water rates adopted for fiscal year 1998-99 and updates the financial analyses to include the revenues and outlays in the District budget for 1998-99. Supporting information required by the District Act on water supplies and uses has also been revised to include more recent data.

The Water Utility budget and rates for 1998-99 fully support the cost of providing Santa Clara County's water and addressing challenges to the quality of the County's drinking water. The Water Utility is embarking on a five-year, $200 million capital improvement program that is primarily directed to enhancing the safety of drinking water delivered from the District's three water treatment plants. Concurrently, the District is responding to the threat to local supplies from the presence of the gasoline additive MTBE in Santa Clara County reservoirs and groundwater aquifers.

In order to continue to provide a reliable supply of safe water in the face of the challenges mentioned above, the District staff evaluated alternative approaches to providing the funds needed in 1998-99. The rates adopted for 1998-99 reflect revised policies with respect to capital reserves and agricultural rates. The change in policy for capital reserves provides more flexibility in funding the capital improvement plan over the next five years. Rates for agricultural water were pegged at 10% of the non-agricultural water rate in each zone.

The Board of Directors adopted water rates for the upcoming year on May 26, 1998. The North County Municipal and Industrial rate for groundwater was increased by 8% from $240 per acre-foot to $260 per acre-foot. The South County Municipal and Industrial rate was not changed and remains at $108 per acre-foot. The adopted rates constitute the first increase for North County Municipal and Industrial customers since July of 1991.

Rates for agricultural water were set at 10% of the Municipal and Industrial rate in each zone. This lowered agricultural rates in the North County by 40% from $43.75 per acre-foot to $26.00 per acre-foot. In South County, the decrease was 6% from $11.50 per acre-foot to $10.80 per acre-foot.

The surcharge on treated water scheduled for delivery under the contracts with retail agencies remains at $70 per acre foot. In July the Board lowered the surcharge to $0 for amounts delivered in excess of scheduled contract amounts from Rinconada treatment plant only.

The report, which follows, includes historical data on District water supply and demand, describes the benefits of the District's activities, and provides financial projections for the next 10 years.

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General Manager

SANTA CLARA VALLEY WATER DISTRICT

WATER UTILITY ENTERPRISE REPORT

FINAL

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August 1998

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PREFACE

This is the twenty-seventh annual report on the status of the District's Water Utility Enterprise. In accordance with Section 26.5 of the District's Act, the District annually prepares a written report on the District's activities on the protection and augmentation of the water supplies of the District. As required by the District Act, this report provides information on the present and future water requirements of the County, the water supply available to the District, future capital improvement and maintenance and operating requirements, financing methods, and the water charges by zone for agricultural water and nonagricultural water.

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I. Adopted Water Rates for 1998-99

Introduction

Santa Clara Valley Water District is the water resource management agency providing safe and reliable water supply to Santa Clara County's nearly 1.7 million residents. The District's Water Utility budget and rate strategy for 1998-99 are designed to provide revenues to pay the full cost of the County's water supply and to address challenges to the quality of Santa Clara County's drinking water. The Water Utility is embarking on a five-year, $200 million capital improvement program that is primarily directed to enhancing the safety of drinking water delivered from the District's three water treatment plants. Concurrently, the District is responding to the threat to local supplies from the presence of the gasoline additive, MTBE, in Santa Clara County reservoirs and groundwater aquifers.

To generate the revenues necessary to meet the challenges mentioned above, the District staff evaluated the level of water rates in 1998-99 under current Board policies and for alternative approaches. The level of rates in 1998-99 was analyzed for its effect on the rates needed in subsequent years to meet the projected needs for operating and capital. After carefully considering public comments from numerous individuals and groups, and after a thorough analysis of the alternatives, the Board adopted water charges for fiscal year 1998-99 that incorporate two changes from past practices. First, the minimum levels for capital reserves were relaxed to provide long-term flexibility in funding future capital needs. Second, the Agricultural rate was set at 10% of the Municipal and Industrial rate in each zone.

This section summarizes Water Utility rates adopted for 1998-99. Section II presents data on Santa Clara County's water supply and water usage. Section III describes water supply and quality challenges facing the Water Utility and the benefits of District activities to address them. Section IV discusses the revenue required to meet needs in fiscal year 1998-99 and provides the financial analysis for the two water charge zones. Also, included in this last section is the projection of the Water Utility finances over the next ten years.

Adopted Water Rates for 1998-99

Table 1 shows the water rates in effect for fiscal years 1994-95 through 1997-98 and the adopted rates for fiscal year 1998-99. For 1998-99, the North County Municipal and Industrial rate for groundwater was increased by 8% from $240 per acre-foot to $260 per acre-foot. The adopted rates for North County, Water Charge Zone W-2, represent the first increase since July 1991 for Municipal and Industrial water. The South County, Water Charge Zone W-5, Municipal and Industrial rate was not changed and remains at $108 per acre-foot. (The boundaries of Zones W-2 and W-5 are shown on the Water Utility Zones map in Appendix C.)

Rates for Agricultural water were set at 10% of the Municipal and Industrial rate in each zone. This lowered Agricultural rates in the North County by 40% from $43.75 per acre-foot to $26.00 per acre-foot. In South County, the decrease was 6% from $11.50 per acre-foot to $10.80 per acre-foot.

The surcharge on treated water amounts delivered under the contracts with retail agencies remains at $70 per acre-foot. The District has the discretion to allow the retailers to purchase treated water in excess of the basic contract amounts, so-called non-contract treated water, when supplies are ample. The amount of the surcharge on non-contract water determines the economics of choosing to pump groundwater rather than purchasing treated water. In July 1998, the Board lowered the surcharge from $20 per acre-foot to $0 to encourage the use of treated water from the Rinconada Water Treatment Plant. The District's objective is to reduce groundwater use on the west side of the Santa Clara Valley Basin where groundwater levels are low compared to other areas of the Basin.

TABLE 1

SUMMARY OF WATER CHARGES
(Dollars per Acre-Foot)

	1994-95	**1995-96**	**1996-97**	**1997-98**	**Adopted 1998-99**
Zone W-2 Municipal and Industrial	240.00	240.00	240.00	240.00	260.00
Agricultural	43.75	43.75	43.75	43.75	26.00
Treated Water Surcharge Contract	70.00	70.00	70.00	70.00	70.00
Non-Contract(See Note)	50.00	50.00	30.00	20.00	0.00
Zone W-5 Municipal and Industrial	108.00	108.00	108.00	108.00	108.00
Agricultural	11.50	11.50	11.50	11.50	10.80

Note: Non-Contract water is available only from the Rinconada Water Treatment Plant in 1998-99.

II. Santa Clara County Water Requirements and Supplies

Long-Term Water Use Trends

Water use in the County is categorized as either Agricultural or Municipal and Industrial. Recorded fiscal year North County water use since 1964-65 and South County water use since 1987-88 (when the District merged with Gavilan Water Conservation District) is shown in Figure 1. Metcalf Road is the dividing line between North County Zone W-2 and South County Zone W-5 (see Water Utility Zones map in Appendix C).

Water use in North County is predominantly Municipal and Industrial. Current projections indicate an increase in Municipal and Industrial use through 2020, when the total North County annual water use is projected to be 393,000 acre-feet. Agricultural water use is expected to range between 3,000 and 4,000 acre-feet per year through the year 2020.

In South County, it is anticipated that Municipal and Industrial water use will continue to increase while Agricultural use is expected to remain between 30,000 acre-feet and 35,000 acre-feet. The latest projections for South County anticipate total water use of about 93,000 acre-feet per year by the year 2020. Municipal and Industrial and Agricultural water uses are projected to be 58,000 acre-feet and 35,000 acre-feet per year, respectively.

The projected water usage for the County, discussed above and shown in Figure 1, totals 489,000 acre-feet in 2020. This represents the likely outcome of many factors, including population trends, employment growth, water conservation practices, and plumbing code changes. Alternative circumstances could lead to total county water needs ranging from as low as 350,000 acre-feet to as high as 500,000 acre-feet in 2020. The lower end of this range is based on projection of 1991 water-use data, which reflects drought and recession-related behaviors. The higher end is based on pre-drought patterns of water use and a strong local economy.

Long-term Water Supply Trends

The District's water supply includes water imported from the Sacramento-San Joaquin Delta; local water stored in reservoirs and groundwater subbasins, and recycled water. The Santa Clara Valley Groundwater Subbasin is in the North County, while both the Coyote and Llagas Groundwater Subbasins are in South County (see Groundwater Subbasins and Major Recharge Systems map in Appendix C).

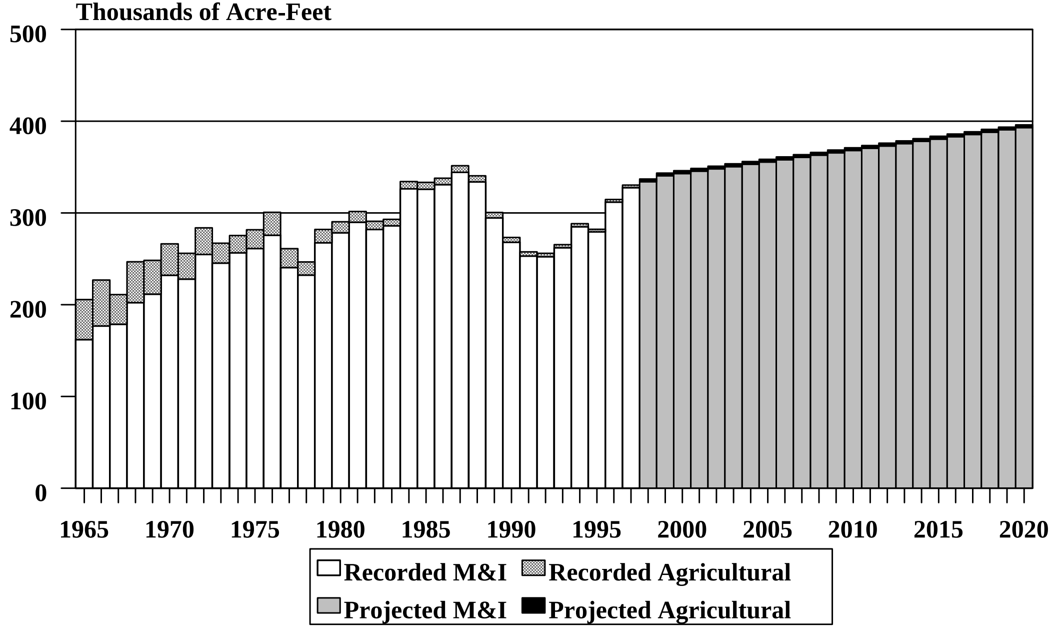
Sources of water supply in North County consist of locally developed water and water imported via the State Water Project , the Federal Central Valley Project , San Felipe Division, and the City and County of San Francisco's Bay Division Pipelines (Hetch Hetchy). South County is supplied by locally developed water and water imported via the San Felipe Division. The recorded water supply in North County since 1964-65 and South County since 1987-88 is shown in Figure 2.

Within the County, the District continues its conjunctive use program of recharging surface water to augment groundwater supplies. The District is providing financial contributions to wastewater agencies for delivery of recycled water for nonpotable uses. Future local supplies are projected to be augmented by nonpotable water from recycled water facilities in San Jose and the South County Regional Wastewater Authority serving Gilroy and Morgan Hill.

The District, along with numerous other urban water agencies, is participating in the statewide Water Conservation Memorandum of Understanding to implement 16 urban water use Best Management Practices. In addition, the District has started urban water use conservation programs in addition to the Best Management Practices and is implementing agriculture water conservation practices required under the Central Valley Project Improvement Act.

Figure 1

Santa Clara County Water Use
North Zone W-2



South Santa Clara County Water Use
South Zone W-5

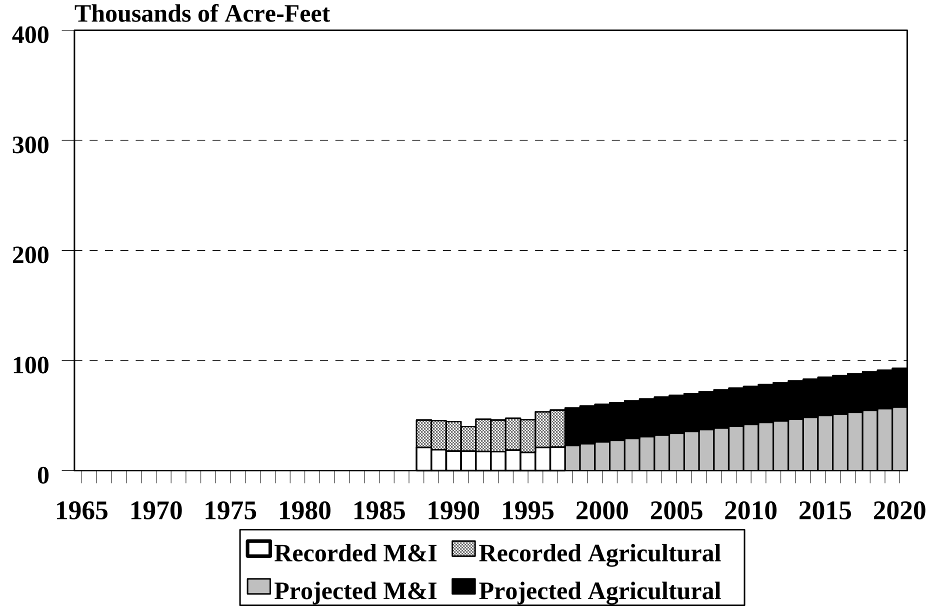
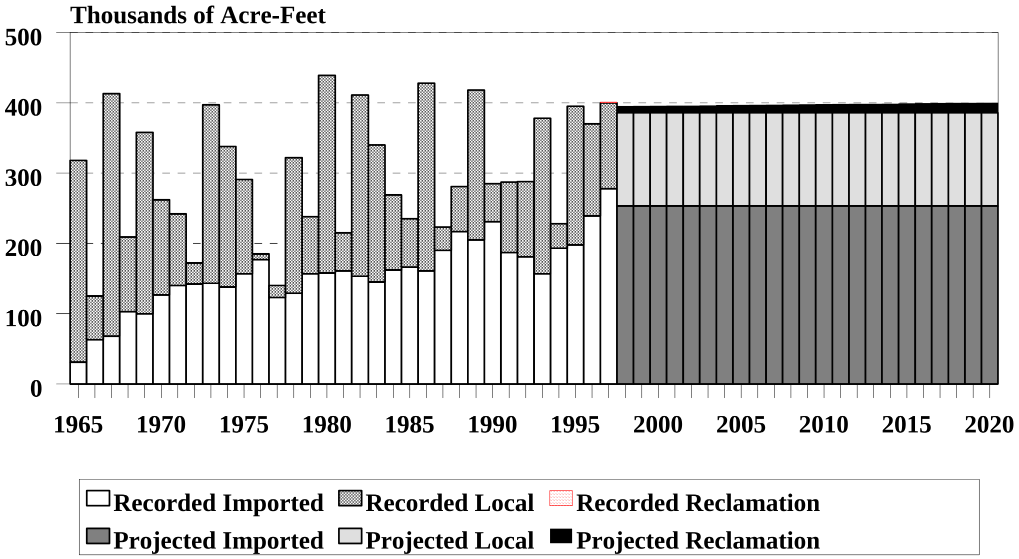
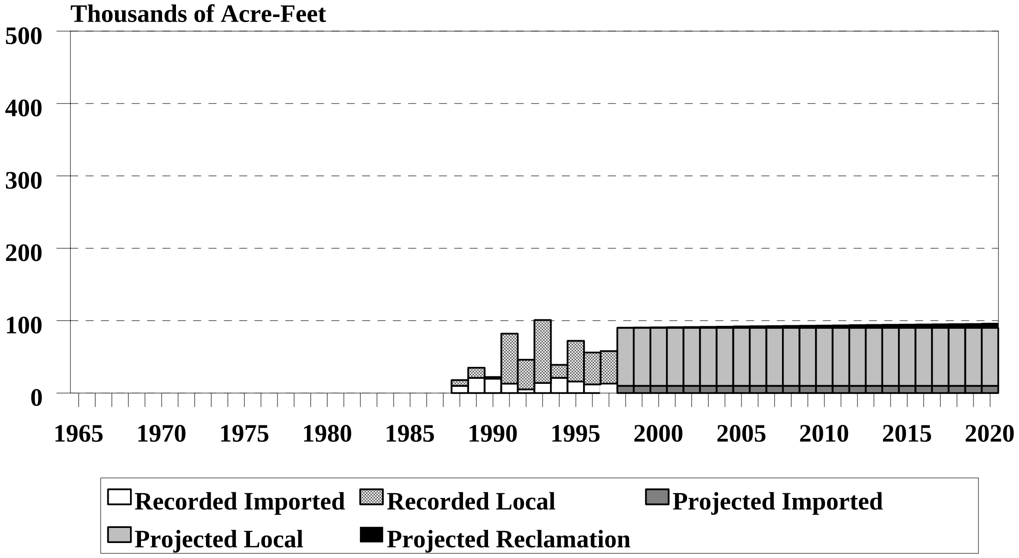


Figure 2

Santa Clara County Water Supply
North Zone W-2



Santa Clara County Water Supply
South Zone W-5



District Water Supplies and Demands

This section documents 1996 and 1997 activities and presents the plan for the 1998 reservoir operations, raw water conveyance, treated water production, and groundwater recharge. Table 2 summarizes the District's sources of water supply and the distribution of supply to meet the demands of the residents in the County.

Recorded Operation in 1996

In 1996, the County had a total of 689,257 acre-feet of water supply from locally conserved, imported, and out-of-county storage. Of this, the District was responsible for 607,943 acre-feet of the supply. Imported water supply for the District was 206,632 acre-feet as a combined source of 89,852 acre-feet from the State Water Project and 101,007 from the Central Valley Project along with 15,773 acre-feet returned under exchange agreement with San Benito County in previous year. Including natural runoff, the local water supplies available was 399,311 acre-feet. In the beginning of 1996, the District had 2,000 acre-feet of water stored in San Benito County’s San Justo Reservoir. The rest of the supply available, totaling 81,314 acre-feet were managed by other agencies in the County.

Out of the total available supply, 305,443 acre-feet were distributed to the District system during 1996. The District banked 45,000 acre-feet of State Water with Semitropic Storage Water District, increasing the District’s banking to a total of 47,000 acre-feet. Also, 16,000 acre-feet of Central Valley Project were exchanged to San Benito County for later use. Treatment plants processed 123,220 acre-feet of water in 1996. After accounting for water used in the treatment process, the District delivered a total of 120,540 acre-feet of treated water, including approximately 20,000 acre-feet of non-contract water. Most of this demand for non-contract treated water resulted from the reduction of the treated water surcharge for non-contract water from $50 per acre-foot to $30 per acre-foot. The District record shows that the residents in the county pumped 162,290 acre-feet of water from the County aquifers in 1996. Of this amount, the District recharge activities replaced more than 70% of the groundwater needed by delivering 117,693 acre-feet to the County aquifers, 88,243 acre-feet to Santa Clara groundwater subbasin and 29,450 to Coyote and Llagas groundwater subbasins. Augmenting the natural recharge through managed releases, the District groundwater recharge facilities have proven effective in preventing severe drawdown of groundwater level, which can lead to irreversible land subsidence. Irrigators purchased 960 acre-feet of surface water in the North County and 1,240 acre-feet in the South County.

Recorded Operation in 1997

In 1997, the County had a total of 818,716 acre-feet of water supply from locally conserved, imported, and out-of-county storage. Of this, the District was responsible for 738,295 acre-feet of the supply. Imported water supply for the District was 247,326 acre-feet as a combined source of 100,000 acre-feet from the State Water Project and 131,326 from the Central Valley Project along with returned amount of 16,000 acre-feet exchanged with San Benito County in previous year. Including natural runoff, the local water supplies available was 443,969 acre-feet. In the beginning of 1997, the District had a total of 47,000 acre-feet of supply stored outside of the County: 2,000 acre-feet of water in San Benito County’s San Justo Reservoir and 45,000 acre-feet in Semitropic Storage Water District. The rest of the supply available, total of 80,421 acre-feet, was managed by other agencies in the County.

Out of the total available supply, 398,994 acre-feet were distributed to the District system during 1997. The District banked additional 35,000 acre-feet of water from State Water Project to the Semitropic Storage Water District, increasing the District’s banking to a total of 82,000 acre-feet. The District reallocated 35,000 acre-feet of Central Valley Project water to the Westland Water District and the San Luis Water District under the terms of the Water Reallocation Agreement. Also, 16,000 acre-feet of CVP water were exchanged to San Benito County and 5,000 acre-feet were returned for later use. District’s Treatment plants processed 134,695 acre-feet of water in 1997. After accounting for water used in the treatment process, the District delivered a total of 132,350 acre-feet of treated water, including 27,800 acre-feet of non-contract water. Again the higher demand for non-contract treated water resulted from the reduction of the treated water surcharge for non-contract water from $50 per acre-foot to $30 per acre-foot. In 1997 the residents in the county pumped 174,890 acre-feet of water from the County aquifer. Of this amount, the District recharge activities replaced approximately 70% of the groundwater needed by delivering 119,881 acre-feet to the County's aquifers, 88,637 acre-feet to Santa Clara groundwater subbasin and 31,244 to Coyote and Llagas groundwater subbasins. Irrigators purchased 1,130 acre-feet of surface water in the North County and 1,420 acre-feet in the South County.

Projected Operation Plan for 1998

The 1998 Operations Plan was developed with the objectives of meeting annual demand, being prepared for future critical dry period water supply demands, protecting water rights, complying with regulatory requirements, and maximizing incidental flood control. Ancillary objectives are to operate efficiently in terms of both cost and water, while minimizing risk and liability. To effectively use and store both local and imported water supplies, the District is optimizing the use of imported water within the County and actively pursuing banking alternatives for the imported water entitlements available in calendar year 1998.

The 1998-groundwater basin management strategy is to maximize in-county storage where the depths to water levels are below operational storage limits. Accordingly, the Board lowered the surcharge on treated water in excess of scheduled contract amounts to $0 per acre-foot at Rinconada Water Treatment Plant to continue to provide an incentive to use treated water in lieu of pumping from wells on the west side of the Santa Clara Subbasin.

In 1998, one hundred percent of the State Water Project entitlement of 100,000 acre-feet is available to the District; however, the District is unable to import the full amount and is planning to store another 32,000 acre-feet to Semitropic Storage Water District. This will increase District's total storage to 112,000 acre-feet. The Central Valley Project has indicated that 100 percent of the Municipal and Industrial and Agricultural entitlements of 152,500 acre-feet will be available. Again, the District is unable to import the full amount available and plans to reallocate 20,000 acre-feet to Westlands Water District and the San Luis Water District under the terms of Water Reallocation Agreement. An amount of 16,000 acre-feet of Central Valley Project will also be exchanged to San Benito County, and 5,000 will be returned for future use. In 1998, the San Francisco Water Department is expected to deliver about 63,000 acre-feet of water to retail water agencies in the northern part of the County. Thus, including Central Valley Project agricultural entitlements, the total imported water supply available for calendar year 1998 exceeds 279,000 acre-feet.

Coming out of a wet winter, the District is expecting higher local supply, 448,000 acre-feet, from District reservoirs and natural runoff. Demands are usually lower in a wet year; therefore, the District is planning to deliver only 120,800 acre-feet of treated water and 146,000 acre-feet of groundwater. However, the groundwater augmentation activities will continue to deliver about 119,500 acre-feet to County's aquifer in preparation to meet the demand of future critical dry period.

Table 2 Water Supplies and Uses from 1996 through 1998

	North County Zone W-2			South County Zone W-5			County Total		
	1996	1997	1998	1996	1997	1998	1996	1997	1998
WATER SUPPLY									
I. WATER SUPPLY AVAILABLE									
District Supply									
Imported Water	194,350	0	0	12,281	0	0	206,631	0	272,600
Local Water	273,707	0	0	125,604	0	0	399,311	0	85,000
Storage Outside of County	2,000	47,000	79,000	0	0	0	2,000	47,000	77,000
Subtotal of District Supply	470,057	47,000	79,000	137,885	0	0	607,942	47,000	434,600
Others Supply									
Hetchy Hetchy	60,990	63,120					60,990	63,120	
Other Reservoirs and Streams (San Jose/Stanford)	18,980	15,770		0			18,980	15,770	
Recycled Water	1,050	700		290	130		1,340	830	
Subtotal of Others Supply	81,020	79,590	0	290	130	0	81,310	79,720	0
TOTAL WATER AVAILABLE	**551,077**	**126,590**	**79,000**	**138,175**	**130**	**0**	**689,252**	**126,720**	**434,600**
II. DISTRIBUTION OF WATER SUPPLY									
Distribution to District System									
To Treated Water	123,220	134,645		0	0		123,220	134,645	
To Surface Water	392			1,139			1,531	0	
To Recharge	88,242	88,638	0	29,450	31,240	0	117,692	119,878	0
To Banking	47,000	79,000	111,000	0	0	0	47,000	79,000	111,000
To Rescheduled/reallocated	16,000	51,000	114,500	0	0	0	16,000	51,000	114,500
Subtotal of Distribution to District System	274,854	353,283	225,500	30,589	31,240	0	305,443	384,523	225,500
Distribution to Others									
To Hetch Hetchy	60,990	63,120					60,990	63,120	
To San Jose /Stanford	18,980	15,770					18,980	15,770	
To Recycled Water	1,050	700		290	130		1,340	830	
Flow to San Francisco and Monterey Bays	195,203	236806	0	107296	102495	0	302499	339301	0
Subtotal of Distribution to Others	276,223	316,396	0	107,586	102,625	0	383,809	419,021	0
TOTAL WATER DISTRIBUTED	**551,077**	**669,679**	**225,500**	**138,175**	**133,865**	**0**	**689,252**	**803,544**	**225,500**
WATER DEMAND									
I. WATER PRODUCTION									
District Groundwater Pumping	112,460	120,510		49,830	54,380		162,290	174,890	
District Treated Water Delivery	120,540	132,350	114,700				120,540	132,350	114,700
District Surface Water Delivery	1,070	1,130		1,240	1,420		2,310	2,550	
Non-District Production	80,910	79,590	0	290	130	0	81,200	79,720	0
TOTAL WATER PRODUCTION	**314,980**	**333,580**	**114,700**	**51,360**	**55,930**	**0**	**366,340**	**389,510**	**114,700**
II. WATER USE									
District Municipal and Industrial	231,310	251,960		19,900	21,890		251,210	273,850	
District Agricultural	2,760	2,030		31,170	33,910		33,930	35,940	
Non-District Use	81,200	79,720					81,200	79,720	
TOTAL WATER USE	**315,270**	**333,710**	**0**	**51,070**	**55,800**	**0**	**366,340**	**389,510**	**0**

III. Benefits and Services Provided By the District

Section II presented current data on the available supplies of water, distribution to the District's facilities, and use of water. To acquire and deliver water to 1.7 million residents in the county, the District is engaged in a wide variety of activities. These activities to augment county supplies and to protect available resources require that the District levy charges on the production of groundwater and to enter into contracts for the delivery of treated surface water. This section describes the services provided by the District and their benefit to the County.

Water Supply Augmentation

To maintain sufficient water supplies to support economic growth and maintain the quality of life in our community, the District is working on programs to ensure adequate supplies in both the short-term and long-term. Obtaining adequate supplies for the future has two aspects: maintaining the reliability of existing supplies through both wet and dry years and developing access to supplies to meet needs in future years.

To manage Santa Clara's water storage reservoirs, both surface and underground, the District operates and maintains a countywide conservation and distribution system to convey raw water for recharge and treatment (see Water Utility Facilities map in appendix C.) Major facilities include the District's ten dams and reservoirs: Anderson, Almaden, Calero, Coyote, Chesbro, Lenihan, Stevens Creek, Uvas and Vasona; which conserve local runoff for either recharge into the groundwater basin or treatment at one of the District's three water treatment plants. The District also operates several local pipelines to transport imported raw water and locally conserved water to various locations for treatment and distribution, or for groundwater recharge.

The District purchases imported water through the Central Valley Project and State Water Project facilities that are used to augment the local supplies. In addition, the district supports the development of recycled water and promotes water conservation in homes and business. A significant effort is also dedicated to prepare long-range water supply plans, including planning for droughts. The principal activities of the district in augmenting water supplies are described below.

Managing Groundwater Recharge

The District operates 10 reservoirs that conserve rainfall for later recharge into the groundwater subbasins. The Santa Clara Valley Groundwater Basin provides about one-half of the County's water supply for potable use. The basin is divided into three interconnected subbasins (see Groundwater Subbasins and major Recharge Systems map in Appendix C), where the District owns and operates more than 30 recharge facilities in six major recharge systems. In addition to using local water, these facilities also percolate imported water into the aquifer. The annual average recharge capacity of these systems is 157,200 acre-feet per year. The groundwater subbasins are also replenished by water that percolates through the beds of unmanaged streams. Without the facilities operated by the District, the County would lose the majority of the natural runoff to the bay.

The Santa Clara Subbasin underlies the northerly portion of the District and includes the majority of the streams and recharge facilities operated by the District. In 1997, the District replenished the subbasin with 63,450 acre-feet of locally conserved water and 25,188 acre-feet of imported water. The Coyote and Llagas subbasins in the southerly portion of the District were replenished with 20,000 acre-feet of locally conserved water and 11,240 acre-feet of imported water.

Recently completed capital improvement projects at recharge facilities are the replacement of the radial gates at the Coyote Percolation Dam and the construction of the San Pedro Recharge Facility in Morgan Hill.

Surface Water Transportation and Storage

Water supply reliability includes both the availability of the water itself as well as reliability and integrity of the infrastructure and systems. Thus, all activities related to operating and maintaining the District’s dams, reservoirs, canals, and pipelines are directly related to providing water supply. The District maintains 10 reservoirs with total capacity of 170,137 acre-foot, 17.3 miles of canals, 142 miles of pipeline, and 8.4 miles of tunnels to supply water to its recharge facilities and treatment plants.

District facilities are subject to regulation regarding seismic performance of District dams, reservoir landslide monitoring and evaluation, and periodic field inspections. Consequently, maintenance activities include continuing liaison with the State Division of Safety of Dams and the Federal Energy Regulatory Commission relative to the safety of District dams. The district is responsible for collecting and reporting dam surveillance data to the State Division of Safety of Dams and to the Federal Energy Regulatory Commission.

The Water Utility uses the County's waterways to transport water between recharge facilities and for recharge in the streambeds. The District has initiated a stream/watershed management approach to manage its activities in and near streams as a steward of watersheds and riparian corridors and in compliance with regulatory mandates. In fiscal year 1998-99, several projects are planned to improve conditions for anadromous fish. The largest project will construct a fish ladder and fish screen at the Blossom Hill drop structure on the Guadalupe River. Additional fish ladders are planned for Masson Dam, Penitencia Creek, and Coyote Percolation Dam. The fish ladder at Blossom Hill in combination with the removal of two barriers that impede the upstream passage of salmon will provide access to 19 miles of spawning habitat. A total of $3.8 million was appropriated in the 1998-99 budget for fish ladders and barrier removal.

Recently completed capital improvements to water transport and storage facilities include restoring the freeboard at James J. Lenihan Dam at Lexington Reservoir and replacing the radial gates at Vasona Dam. Capital improvement projects in progress include the expansion and upgrade of the Raw Water Control System and the rehabilitation of Almaden-Calero Canal. Table 3 shows the schedule for capital projects.

Table 3 Capital Improvement Projects – Fiscal Year 1997-98 through 2002-03
(Millions of Dollars)

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
Source of Supply						
Geotechnical Surveillance Automation Project	0.2	0.1	1.2	0.1		
** **South County Recycled Water Improvement**		0.9	1.9	0.4		
Santa Clara Tunnel Landslide Repairs	0.5	0.2				
Lenihan Dam Outlet Modifications	1.1	0.2	0.6	0.2	0.3	3.0
** **Chesbro Dam and Reservoir**			0.2	0.7		
Future Capital Replacement						
Other Source of Supply Capital Improvements	0.1	0.0	0.1			
Raw Water Transmission & Distribution						
Raw Water Maintenance Wetladns Mitigation		1.0				
Raw Water Control System	0.4	0.4	1.0	2.1	2.2	
Coyote Canal Extension Abandonment	0.2	0.0	0.9	0.2		
Evergreen Canal Abandonment		1.0	0.4			
Kirk Ditch	0.5	0.0	0.1			
Almaden Calero Canal Rehabilitation	0.4	0.0	6.9	0.4	0.3	
Fish Ladders & Screens	0.7	3.8	0.4			
Other Raw Water T&D Capital Improvements	0.8					
Water Treatment						
Water Quality Regulation Compliance Project	0.3	0.9	0.2	2.1	0.8	0.3
Water Treatment Improvement Project Stage 1	3.8	1.1	10.6	1.1	0.2	
Water Treatment Improvement Project Stage 2	0.0	0.3	41.7	63.1	1.9	0.7
Penitencia Water Treatment Plant Upgrade	3.9	6.1	1.0			
STWTP Corrosion Coating	0.6					
New Water Quality Laboratory	0.2	0.1	1.6	8.4		
Rinconada Corrosion Protection			3.5	0.3		
Other Water Treatment Capital Improvement	0.9	0.2	0.4	0.1		
Treated Water Transmission & Distribution						
Treated Water T&D Instrument Upgrade	0.4	0.2	0.1			
SCVWD/San Francisco Water Dept Intertie	0.1	0.0	2.1			
Milpitas Pipeline Relocation	0.2	1.0	0.1			
Rinconada Reservoir Roof Rehabilitation	0.1	0.1	0.9			
Parallel West Pipeline			0.4	0.4	0.9	2.5
Other Treated Water T&D Capital Improvements	0.5	0.1				
Administration & General						
Automated Mapping/GIS	0.2	0.1				
Total District Capital Improvements	**16.1**	**17.8**	**76.6**	**79.8**	**6.6**	**6.5**
Funding Sources						
Current Revenue	13.9	5.7	0.0	0.0	0.0	0.0
Reserves	2.1	12.2	0.0	0.0	0.0	0.0
Revenue Bonds	0.0	0.0	76.6	79.8	6.6	6.5
Total Capital Improvements	**16.1**	**17.8**	**76.6**	**79.8**	**6.6**	**6.5**

Note: ** Capital Improvement Projects for South county

Imported Water

The State Water Project and federal Central Valley Project are the sources of approximately 50% of District water supplies, delivering water from the northern California mountains via the Sacramento/San Joaquin Delta. Imported water is conveyed to Santa Clara County through the South Bay Aqueduct, which carries water from the State Water Project, and the Pacheco Conduit, which brings water from the Central Valley Project. (The San Francisco Water Department also imports water to Santa Clara County customers from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains.)

Maintaining access to high quality supplies of imported water is essential to meeting current water needs and to implementing the District's Integrated Water Resources Plan strategy for future water supplies. Both Board and staff members are currently devoting considerable time in three areas related to securing reliable supplies of imported water:

1. Restoration of the San Francisco Bay Delta
2. Banking available supplies for future use
3. Managing Central Valley Project contract issues.

1. Restoration of the San Francisco Bay Delta

The Bay-Delta is an intricate web of waterways created at the junction of the San Francisco Bay and the Sacramento and San Joaquin rivers. The District's imported water supplies are dependent on the State and Federal facilities in the Delta. Moreover, the Bay-Delta is a vital link in the California water system. It supplies drinking water for more than 22 million Californians, is a source of irrigation for California's $24 billion farm industry, and is home to the largest estuary on the west coasts of North and South America. Unfortunately for the past 150 years, development activities such as hydraulic mining dredging and channelization, flood control, pollution, and large-scale water supply projects have contributed to the environmental deterioration of the Bay-Delta and a decline in its water quality.

Since the signing of the Bay-Delta Accord on December 15, 1994, a coalition of State and Federal agencies, together with the District and other stakeholders, has worked to develop a long-term "fix" for problems in the San Francisco Bay Delta. The accord was intended to provide a reprieve from ongoing disputes over water issues for a period of three years. The coalition, known as CALFED, has been developing a long-term plan for fixing the Bay-Delta in cooperation with environmental, urban, and agricultural interests. The District is actively involved in the development and evaluation of measures because of the importance of the outcome on the reliability and quality of the District's imported water supplies.

After extensive public and technical review, CALFED has identified three potential alternative solutions, each of which comprehensively addresses the four main problems with the Bay-Delta system: ecosystem degradation, water supply reliability, water quality, and levee system integrity. The draft Programmatic Environmental Impact Statement and Report on Potential solutions, released in mid-March 1998, is the result of three years of effort that commenced after the signing of the Bay-Delta Accord on December 15, 1994. The Accord was extended for an additional year in order to provide CALFED and stakeholders additional time needed to prepare the draft Programmatic Environmental Impact Statement and Report and to complete the environmental review.

The environmental document evaluates three alternatives for improving water quality in the Bay-Delta, while maintaining the water supply system. The main difference among the alternatives is how each would move and store water within the Bay-Delta system. Technical staff and public working committees evaluated all three alternatives against such criteria as benefits to water quality, impact on fish and wildlife, total cost and operational flexibility. A preferred alternative will not be selected until late 1998, after all public comments have been received and considered. Certification of the final environmental documents is expected to occur in 1999.

The total cost of the alternatives under consideration by CALFED ranges from $9 billion to $13 billion, but because of many uncertainties the District's share cannot be estimated. Therefore, no costs for the Bay-Delta solution were included in the financial projections.

2. Banking Available Supplies for Future Use

The District's Integrated Water Resources Plan identified banking of excess supplies in wet years, as a central element in the preferred strategy for providing supplies needed in future dry years.

In May 1996, the Board took the first step in implementing the banking strategy, when it approved an agreement with Semitropic Water Storage District to store 45,000 acre-feet of State Water Project water. Another 30,000 acre-feet were added in 1997, and the District has completed arrangements to store additional 30,000 acre-feet with Semitropic in the summer of 1998.

Discussions with other water contractors to reallocate entitlements of imported water have resulted in agreements that will stabilize available imported supplies through wet and dry periods.

3. Managing Central Valley Project Contract Issues

The Water Utility's agreement with the Bureau of Reclamation requires payment of a major share of the costs of constructing the San Felipe Division of the Central Valley Project. However, over the years since the first deliveries of federal water began in 1987, the Bureau and the District have disagreed on a number of matters related to cost allocation and calculation of interest costs. The District has paid for Central Valley Project water under the contract provisions, but the total owed to the Bureau has continued to increase because these payments are not sufficient to pay the District's current costs. Funds to pay the full costs of the San Felipe facilities have been set aside in a reserve, the Bureau Repayment Appropriation.

In September 1996, the Board approved payment of $20 million toward the District's accrued obligations to the Central Valley Project; one half of the payment was funded from the Bureau Repayment Appropriation. The District has successfully negotiated resolution of most of the issues that were blocking payment of the Water Utility's accumulated costs of the Central Valley Project. In 1997, the District signed a binding agreement to renew its Central Valley Project contract as required under the provisions of the Central Valley Project Improvement Act, and is prepared to pay sufficient amounts in fiscal year 1998-99 to stem further increases in the amount owed. The financial projections presented later in this report assume continuing future payments to the Bureau of Reclamation that will prevent further increases and payoff the District's obligation.

Recycled Water

Recycled water was identified in the Water Utility's Integrated Water Resources Plan as one element of the preferred strategy. Since the Integrated Water Resources Plan was completed in December 1996, the District has coordinated all water recycling efforts to augment supplies within the framework of the plan. The District's current approach is to develop partnerships with the cities and publicly owned treatment works that develop and or distribute recycled water. Two major efforts are underway.

The first is to provide financial support for nonpotable water. The District provides financial support to cities that develop recycled water in accordance with the financial support agreements executed with each city. In 1997, the Board increased the District's financial support to suppliers of nonpotable recycled water from $93 per acre-foot to $115 per acre-foot. The District currently has agreements with the City of Sunnyvale and the South Bay Water Recycling Project.

Recently, the District and the South County Regional Wastewater Authority completed preliminary studies that confirm the feasibility to restore recycled water deliveries from an existing recycled water pipeline in Gilroy. The District plans to rehabilitate the pipeline and operate the pipeline to deliver nonpotable water supplied by the South County Regional Wastewater Authority. This capital improvement project is estimated to cost approximately $3 million and is included in the projection of South County capital costs.

Other District activities include staff support to the Water Retailer's Recycling Subcommittee, the Agricultural Water Advisory Committee and the Landscape Advisory Committee. Staff members also track technical and regulatory developments that affect the production and use of recycled water and participate in statewide recycling organizations and activities.

Water Conservation

The District's water conservation program is essential to improving water supply reliability because water savings reduce current and future water demand, thereby helping to avoid shortages in the future. State and federally mandated conservation programs include implementing a set of Best Management Practices contained in the Memorandum of Understanding regarding Urban Water Conservation, adopted by the Board in 1991. Key program elements include Ultra-Low-Flush Toilet Rebates, Low-Flow Showerheads, Water Efficient Landscape, Commercial/Industrial and Agricultural water Management Programs. This program's goal is to reduce water demands by 46,000 acre-feet per year by the year 2020. The program provides financial, administrative, and technical assistance both to the water retailers and to residents and businesses within the County. In fiscal year 1997-98, the District accomplished the following:

- Ultra low flush toilet rebates issued: 15,456
- Water efficient washing machine rebates issued: 2,541
- Low-flow showerheads distributed: 4,762
- Faucet Aerators Distributed: 4,340
- Large Turf Audits completed (Irrigation Technical Assistant Program): 82 sites
- Financial incentives paid to businesses for making water efficiency improvements: 3 sites, $23,962

In the summer of 1998, the District plans to initiate a residential water audit program, which will provide residents a free water use/audit survey of their home and garden.

Water Quality Protection

In addition to augmenting water supply, the district is responsible for protecting surface and groundwater resources for use in the county. Water quality protection includes (1) treating local and imported surface water for sale to retailers and (2) programs to protect surface and groundwater resources from contamination. Water treatment is necessary to ensure that the water the district provides meets or exceeds all federal and state drinking water standards. Resource quality protection has numerous aspects that are discussed below.

Water Treatment

The district owns and operates three water treatment plants: Santa Teresa Treatment Plant, Rinconada Treatment Plant, and Penitencia Treatment Plant, which provide treated water to the County.

Reflective of its commitment to provide the highest quality water possible, the District was among the first water utilities nationwide to join the Partnership for Safe Water in 1995. The Partnership is a voluntary program developed cooperatively by the United States Environmental Protection Agency, the American Water Works Association, the Association of State Drinking Water Administrators and several other national drinking water industry organizations. The purpose of the program is to further reduce the potential risks to consumers from microbial contaminants such as cryptosporidium. This is accomplished by evaluating treatment plant facilities, processes, operating and maintenance procedures, management oversight practices, and then implementing appropriate improvement measures. Participation in this program has already yielded impressive results. During 1997, the District surpassed the Partnership's goal for filtered water turbidity, a critical indicator of plant performance.

The District is proceeding with process improvements at each of its three treatment plants, because of two relatively new regulations, the Enhanced Surface Treatment Rule and the Disinfectant/Disinfection By-product Rule. The changes in the process for water treatment will reduce the production of harmful by-products that occur when surface waters containing organic materials are disinfected with chlorine.

Disinfection using oxidants such as liquid chlorine or chloramines is an essential step in the purification of drinking water. The destruction of disease causing organisms by disinfection has been in widespread use since the early 1900s, and has eliminated outbreaks of water-borne diseases such as cholera and typhoid. Maintaining trace levels of chlorine or chloramine in drinking water provides the added benefit of preventing microbial growth in the pipelines that deliver water throughout the distribution system. Disinfection by-products are compounds that are formed when natural organic matter in water reacts with chemicals used for disinfection. Some disinfection by-products such as trihalomethanes are suspected to have long term health effects. In an effort to reduce the levels of disinfection by-products without increasing the risk from microbial contaminants, the United States Environmental Protection Agency adopted a regulated limit on the amount of trihalomethanes allowable in drinking water, of 100 parts per billion. The District produces water with the least amount of trihalomethanes possible, by doing such things as delaying chlorination (which reduces the formation of by-products by limiting the time that chlorine is in contact with organic materials), switching source water when levels of organic material are high, enhancing coagulation, which improves the removal of organic materials before the treatment process; and using chloramine instead of chlorine for residual disinfection.

The District is currently upgrading all three of its drinking water treatment plants in 2 stages in order to install new and improved methods of treatment to meet drinking water regulations. Stage 1 changes include modifications to the chlorine system, provide ferric chloride and potassium permanganate chemical feed systems, and install total organic carbon analyzers. Stage 2 of the planned work will further reduce the levels of THMs in treated water. This will be accomplished by further delaying the application of chlorine, enhancing coagulation, and eventually by switching to ozonation as the primary disnfection method instead of chlorination.

This $131 million (1998 dollars) capital improvement project is scheduled for completion in

2003. To complement these new treatment efforts, the District also is planning a new Water Quality Laboratory (see Table 3 for construction schedule). The facility will replace the 30-yar-old Rinconada laboratory and will more reliably and cost-effectively monitor the quality of our water supplies. Also, in preparation for the changes needed to meet regualtory requirements, work totaling $5.5 million is under way at the Penitencia Water Treatment Plant to rehabilitate its aging facilities.

A complementary approach to managing residuals from treatment processes is to reduce the organic content of source water. The water imported by the district through the Delta has high levels of organic compounds from agricultural drainage and urban discharges. A major objective of the District's participation in CALFED is to improve the quality of water available from import from the Delta. The District can only endorse CALFED solutions that improve water quality in the Delta.

Resource Protection

Preserving the quality of water supplies is easier than treating contaminated or degraded water. Pursuant to the District's mission to provide high quality water to Santa Clara County, the District continually addresses water quality problems that threaten the delivery of safe, reliable high quality water. The purpose is to ensure water delivered to the District's retailers meets or exceeds all state and federal drinking water regulations. This includes all existing regulations and provisions of the Safe Drinking Water Act Amendments of 1996, the California Safe Drinking Water Act and any provisions of the District's treatment plants' operating permits from the California Department of Health Services. The District also responds to unforeseen water quality issues and acts to ensure the continued ability to deliver high quality water.

The following subsections describe the District's activities to protect groundwater and surface water that are included in programs such as Water Quality and Reservoir Watershed Management, Groundwater Quality Management, Well Ordinance Program, the Underground Storage Tank Program, and Water Quality Special Studies. All these are directed at protecting the County's sources of water.

1. MTBE

A major new threat to the drinking water supply is the gasoline additive called MTBE (methyl tertiary butyl ether). MTBE is a colorless chemical compound added to reformulated gasoline that was developed to reduce smog and meet the goals of the Clean Air Act. The State Air Resources Board mandated the year-round statewide use of reformulated gasoline in 1996. Since November 1996, the District – in partnership with the county's water retailers – has engaged in an aggressive monitoring program to track the presence of MTBE in Santa Clara County. In November 1997, the District confirmed small amounts of the chemical compound in water entering and leaving its three treatment plants. Traces of the additive have been found in a well owned by Great Oaks Water Company; this well was removed from service. To protect local reservoirs from MTBE, the District's Board of directors voted to reduce the number of powerboats allowed on three of the District's 10 reservoirs and set restrictions on refueling of boats.

The human health effects of ingesting MTBE-contaminated water are not well known. However, the U.S. Environmental Protection Agency has labeled MTBE a "possible" human carcinogen and has issued a drinking water advisory of 20 ppb (parts per billion) to 40 ppb to protect public health and for taste and odor concerns. As of July 1998, the California Department of Health Services' Office of Drinking Water is considering establishing a secondary maximum contaminant level for MTBE of 5 ppb. This is well below the concentrations found in samples from Calero reservoir in April through June 1998. In response to these test results, watercraft with two-stroke engines (jetskis) were temporarily banned from Calero until further tests show that concentrations have decreased.

The District is aggressively pursuing long-term solutions to this potential problem. These include more concentrated efforts to keep more of the contaminant from entering public water supplies along with expanding a number of legislative efforts (through District's Government Relations Office) to restrict the use MTBE as a gasoline additive and to request for State funds to clean up the contaminated site. Testing continues at reservoirs and treatment plants, and District staff is evaluating the risk from leaking underground storage tanks.

The District is also proceeding on a free well water-testing program for the residents whose wells are within ½ mile of known MTBE contamination in groundwater. This is a special two-year survey that will not only assure well owners of the current quality of their well water, but also provide benchmark data outside the areas near underground tanks that are the focus of risk assessment efforts. Fifteen private wells have been sampled since the beginning of the program. Of the 15, 2 were in North County and 13 were in South County.

2. Nitrate Management

A second threat to groundwater supplies is nitrate contamination that occurs is the southern portions of the County. High nitrate concentrations in drinking water can cause health problems in children. The District has designed a Nitrate Management Program to reduce nitrate loading to the Llagas groundwater basin. As part of this program, the District has mailed nitrate information to well owners. In 1997, the District offered to test samples for well operators to identify water sources that could be a threat to children. Through mid-June 1998, 546 wells have been tested, and 52% of the samples were found to exceed health standards. Also a program named CIMIS (California Irrigation management Information System Station) is set up to provide data needed to improve irrigation efficiency and reduce the movement of nitrates to aquifers.

3. Underground Storage Tank Fuel Cleanup Program

The District oversees the investigation, cleanup, and closure of cases where soil and /or groundwater has been affected by petroleum fuel, and additives such as MTBE, from leaking Underground Storage Tanks.

Over 2,000 fuel leak cases have been reported in Santa Clara County, and 60% of these cases have received regulatory closure from Regional Water Quality Control Board, San Francisco Regional Water Quality Control Board, and Santa Clara Valley Water District. The majority of the remaining cases are associated with releases of gasoline. MTBE has been detected at more than 300 tank sites and has infiltrated a municipal water supply well. This District is expanding its underground fuel storage tank oversight to identify and cleanup those sites that pose the greatest risk to the groundwater basin.

The District is currently overseeing 701 tank sites in the North County and 23 sites in South County. Up to Date, 931 sites in the North County and 22 sites in South County were signed off by the District.

4. Well Ordinance Program

The District protects the quality and quantity of the County's groundwater resources by ensuring that all wells in Santa Clara County are constructed, destroyed, modified, and maintained in compliance with the provisions of the District Well Ordinance and the State Water Code.

This operation program includes permitting, tracking, inspecting, and violation enforcement of all wells in Santa Clara County. The program also assists the public in destroying abandoned wells and maintains District-owned wells. Key data for fiscal year 1997-98 are summarized below.

- The District permitted 2,310 wells and other deep excavations constructed or destroyed.
- The District inspected 2,052 wells and other deep excavations constructed or destroyed.
- The District registered 926 wells constructed.
- The District provided drilling services to the owners of 24 abandoned wells.

5. Groundwater Management

To ensure the reliability of the County's groundwater supply the Districts and report groundwater quality data, analyzes data on contamination sources, identifies existing and potential groundwater quality problems, and implements groundwater quality protection and management strategies.

6. Hazardous Materials Management

To prevent hazardous contamination the District operates the investigation, analysis, removal, and disposition of suspected or know hazardous waste dumped or spilled on the close vicinity of the County's source of supply such as reservoirs, recharge ponds and creeks.

7. Urban Runoff Program

The District has dedicated efforts to improve the quality of storm water runoff as a member of the Santa Clara Valley Urban Runoff Program. Efforts such as this improve the quality of storm water that flows into streams in Santa Clara Valley and of South San Francisco.

Overall Resource Management

Long-Term Planning for Water Supply

As the wholesale water supplier for Santa Clara County, the District historically has been responsible for planning the County's long-term water supply. With the rapidly growth in economy and population, Santa Clara County is facing the crucial question: How to ensure there is sufficient water to satisfy future demand?

This question was addressed in the District's Integrated Water Resources Plan (IWRP), which was accepted by the District's Board of Directors on December 10, 1996. The planning project began in March 1996 and worked closely with members of the general public; community, business and environmental groups, cities, and other agencies to develop a preferred strategy to meet water shortages expected in dry years. The IWRP's preferred strategy for meeting water supply needs through the year 2020 includes programs based on four primary components – water banking, water transfers, water recycling, and water conservation. These programs, some of which are already under way, will be phased into operation in response to water supplies and demand. Updates to the plan are anticipated every three to five years.

Watershed Resource Management

Watershed resource management will help balance the needs of water supply, water quality, flood protection, and wildlife and habitat preservation.

The district is pursuing plans that are broader in scope and designed to protect and manage water supply and quality. This includes activities such as monitoring, measuring, and modeling the water supplies, planning for future needs, land use review, and coordinating closely related activities which could adversely affect water supply. The Water Resource Protection Unit provides for the enforcement and application of Ordinance 83-2, review of environmental documents, and coordination with other agencies with regard to their land use decisions, which affect the water resources in Santa Clara County.

Government Relations

To look after the County's interest in water issues, the District's Government Relations Unit coordinates timely communication and advocacy of the District interests with the State legislature, U. S. Congress, state and federal regulatory agencies, and local government entities. This unit increases recognition of the District at local, state, and federal legislative levels; builds legislative support for District programs and policies; develops timely public policy analysis and responses to local issues affecting the District and its retail customers, as well as the local business, community, and minority groups.

Public Information & Education

Public information programs are designed to inform and educate residents about key water quality and water supply issues that affect the water utility's operations and planning. The public information office prepares news releases on current events and prepares brochures to inform residents of water supply and water quality issues. The utility's water education program teaches classes and provides curriculum materials for pre-kindergarten through college level students and educators.

Other Activities

In addition to the direct operation and maintenance of facilities to provide water in the County, there are numerous supporting activities that collect data on rainfall, stream flows, reservoir storage, measurement of water use, and other information that is essential to plan and operate the water distribution and delivery system.

IV. Financial Outlook for the Water Utility System

Introduction

The purpose of this section is to describe the short-term and long-term financial needs for the District and the funding approach endorsed by the Board during the rate setting process for fiscal year 1998-99. Section I reported the rates adopted for 1998-99. Section IV describes the multiyear financial analysis and the funding approach that was the foundation for the Board's decisions on rates in each zone. It also presents projected water rates in each zone for next ten years.

Between 1988 and 1993, a statewide drought limited water supplies and required extensive conservation, leading to more efficient use of available supplies. In the three worst years of the drought, the Water Utility saw its volume of water sales decline by over 20% relative to deliveries in 1987-88. To maintain revenues over this period, the Municipal and Industrial rate increased 160% for the North County, and 400% for the

South County. When the rains returned in 1993, the Board of Directors lowered rates in July 1993 by roughly 10%.

Water rates have remained essentially unchanged for five years, and the Water Utility remains in sound financial condition at the end of fiscal year 1997-98. However, the future contains many challenges that require additional funds for both capital and operating outlays. Projections of the capital and operating costs indicate that wholesale water rates will need to increase by 50% over the next 10 years.

Three issues are the major contributing factors to rising need for revenues:

- Quality and safety of water delivered from the District's three water treatment plants
- Contamination of local groundwater and surface reservoirs from Methyl Tertiary-Butyl Ether (MTBE)
- Costs of imported water from the Federal Central Valley Project (CVP)

The financial projections shown in this section incorporate the estimated costs to address and solve the threats from these factors. Background information was discussed in Section III.

Two additional challenges could also impose significant future financial demands on Water Utility customers:

- Costs to implement proposed solutions to the Bay-Delta water quality problems
- Costs of potential water supply capital investments to implement integrated Water Resource Plan such as future recycled water facilities in the North County.

The financial outlook does not include any estimates of the utility's costs for these latter two items because they are in the conceptual planning stages and include a wide range of potential program costs and facility investments (see Section III).

Review of District's Finances for 1996-97, 1997-98, and 1998-99

Table 4 shows the revenue requirements that are the basis for the adopted rates, breaking out operations, water purchases, extraordinary items, and capital. The net requirements are the revenues that must be available from water sales, property taxes, and other sources, after allowing for funds added to, or used from, reserves.

The table shows that operations costs are expected to rise moderately in 1998-99 from the 1996-97 actual and 1997-98 estimated amounts. The increases are due to the expanding efforts on resolving water quality issue such as MTBE for approximately $2.7 million. The increased cost also reflects the expansion of recycled water activities by approximately $1 million from 1997-98.

All other categories show large increases planned for 1998-99. Water purchases increase by almost $9 million to cover the total costs of the District's Central Valley Project (CVP) for 1998-99. This increase is necessary to stem the further growth of the District's accumulated obligation for CVP capital cost repayment.

Outlays for extraordinary items are budgeted at $43 million in 1998-99, compared to $0 last year. Extraordinary outlays in 1996-97 were for $20 million to the CVP deficit repayment and a $3.2 million special payment for retrofit Ultra-Low-Flush toilets through the Cost Sharing Agreement with the City of San Jose. Extraordinary items for 1998-99 include a planned $40 million payment toward the District's accumulated obligation to the CVP, an amount of $2.5 million for banking water with Semitropic Water Storage District, and $0.5 million for planning studies in conjunction with South Bay Water Recycling.

TABLE 4

OVERVIEW OF WATER UTILITY REVENUE REQUIREMENTS
($ Millions)

Revenue Requirements	Actual 1996-97	Estimated 1997-98	Projected 1998-99
Operations	52.8	54.0	60.0
Water Purchase	20.9	21.9	31.0
Extraordinary Items	23.2	0.0	43.0
Capital Projects	11.6	16.1	17.8
Total Requirements	108.5	92.0	151.8
Changes in Reserves	-8.6	0.2	-53.6
Net Requirements	$99.9	$92.2	$98.2

Appropriations for capital projects rose by 40% in 1997-98. After holding at $11.6 million in 1996-97, capital appropriations for 1997-98 are $16.1 million with 50% of the amount for enhancing and upgrading the facilities in District treatment plants. In fiscal year 1998-99, the capital investment for the three treatment plants will continue at about 50% of the budgeted amount of $17.8 million.

Reserves provide a balancing mechanism to smooth fluctuations in the level of revenue that must be raised from water sales in a single year. In 1996-97, specified reserves established for these purposes were used to fund the $23.2 million in extraordinary payments to the CVP and City of San Jose. An annual operating surplus reduced the net change in total reserves to a decrease of $8.6 million. In fiscal year 1997-98, reserves are estimated to decrease by $0.2 million.

The adopted rates for 1998-99 in Table 1 “Summary of Water Charges” are predicated on a net reduction of $53.6 million, as a result of the following:

- A decrease of $2.2 million in Operating Reserves as a net result of an increase of $2 million in Working Capital Appropriation and a decrease of $4.2 million in Supplemental Water Supply Appropriation for funding additional water banking and expanding activity in water recycling.
- A decrease of $11.4 million from Capital Reserves.
- A decrease of $40 million from Bureau Repayment Appropriation to pay toward the District’s accumulated obligation to the Federal Bureau of Reclamation for Central Valley Project capital investment.

Overview of Long-term Capital and Operating Plans

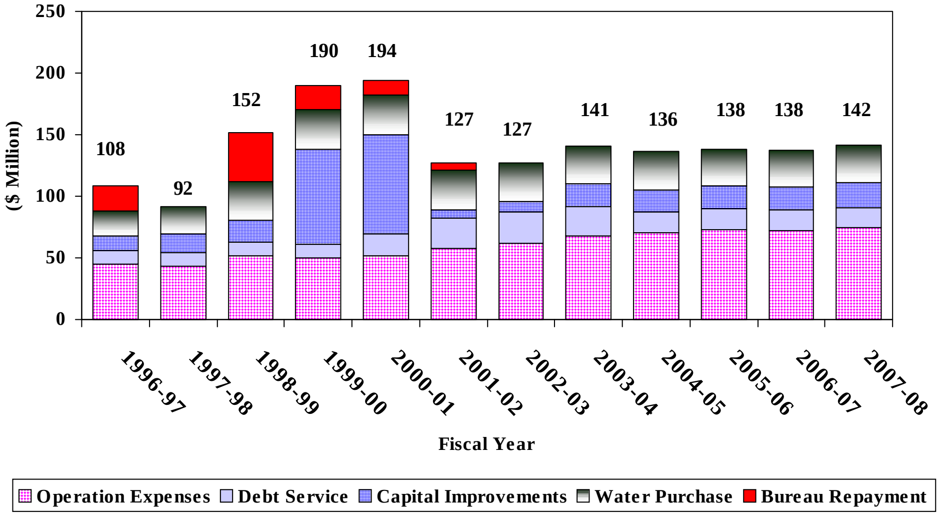
To estimate the water charges that raise sufficient revenue for the District, the staff not only has to analyze the immediate needs of the District but also the anticipated requirements in the years to come. The projected outlays in next ten years (see Figure 3) include capital and operating costs for the water quality and water supply issues discussed in Section III. Initial stages of a $200 million investment needed to comply with mandated water quality regulation are under way at the three water treatment plants. These capital improvement plans are largely responsible for the rapid growth in total outlays over the next three years depicted in Figure 3.

In addition to the capital improvements, the plan to pay to the Bureau of Reclamation the District's costs for the San Felipe Division of the CVP also contributes to the magnitude of projected outlays. The District is planning to pay off the $77.3 million obligation in next four years - starting with $40 million in 1998-99 and followed by consecutive annual payments of $20 million in 1999-00, $12 million in 2000-01, and $5.3 million in 2001-02. Concurrently, annual payments of approximately $30 million ($10 million for State Water Project and $20 million for Central Valley Project) are projected as needed to stem any further growth in District's accumulated obligation for CVP capital investment. Annual operation expenditures will increase significantly when the ozonation processes begin at the three water treatment plants. In general, other operating costs are expected to rise with inflation, barring unforeseen factors that may place new requirements on the utility.

Figure 3

1999 Ten-Year Program

Projected Expenditure



Long-Term Funding Approach for the Water Utility

To provide the financial requirements projected for the next ten years requires a financial plan that combines current revenues (from water sales), revenue bond sales, reserves, and other sources to satisfy total needs each year. The immediate challenge is to provide funds over the next 5 years for utility plans to invest $200 million in capital facilities and equipment.

Alternative approaches to meet the future financial needs of the Water Utility were investigated and presented to the District's Board of Directors and public at several public hearings. Current utility revenues are about $90 million annually, and revenues from water sales are about $75 million. Relying on revenue from water sales to fund capital needs would require raising and lowering rates as capital needs fluctuate. Capital reserves are expected to be about $27 million at the end of 1997-98 and, therefore, would be rapidly depleted by long-term needs.

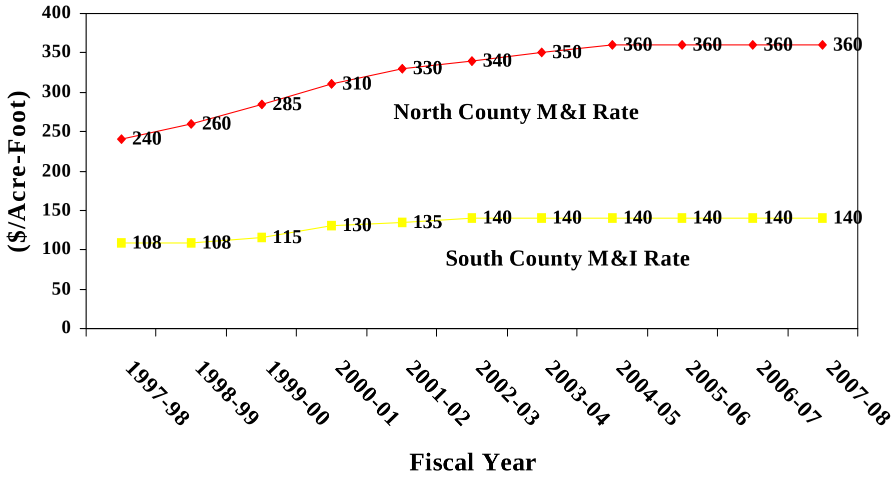
With the enormous amount of capital investment in next five years, using revenue bonds to fund the total of $200 million capital improvement appeared be the most acceptable funding mechanism to avoid large fluctuations on water rates. By relaxing minimum requirements for capital reserves, reserves can be used to better schedule the sale of revenue bonds to allow water rates to be increased in a series of moderate increases, rather than in a succession of large and small increases.

During the public hearings on water rates in May and June of 1998, alternative financing approaches were presented to the Board of Directors. Based on the financial analysis and after considering public comments, the Board adopted an 8.3% increase in the north county groundwater charges for fiscal year 1998-99. This sets the stage for a series of three more annual increases that, in combination with $200 million in revenue bonds, will fund capital and operating needs through 2001-02. As shown in Figure 4, rates are projected to increase from $240 per acre-foot in 1997-98 to $330 per acre-foot in 2001-02, an average increase of 8.3% per year.

The water utility is embarked on a financing strategy that relies on revenue bonds for capital needs and uses available capital reserves to moderate year-to-year increases in water rates. Table 5 shows the projected revenues, expenditures, and reserves over the next ten-years based on the financial strategy now in place. Using revenue bond financing means that the District will see debt service rise from $11 million in 1998-99 to $26 million in 2002-03, assuming the treatment plant improvements are constructed as indicated in the schedule in Table 3.

Figure 4

Ten-Year Rate Projection



(Placeholder for Table 5)

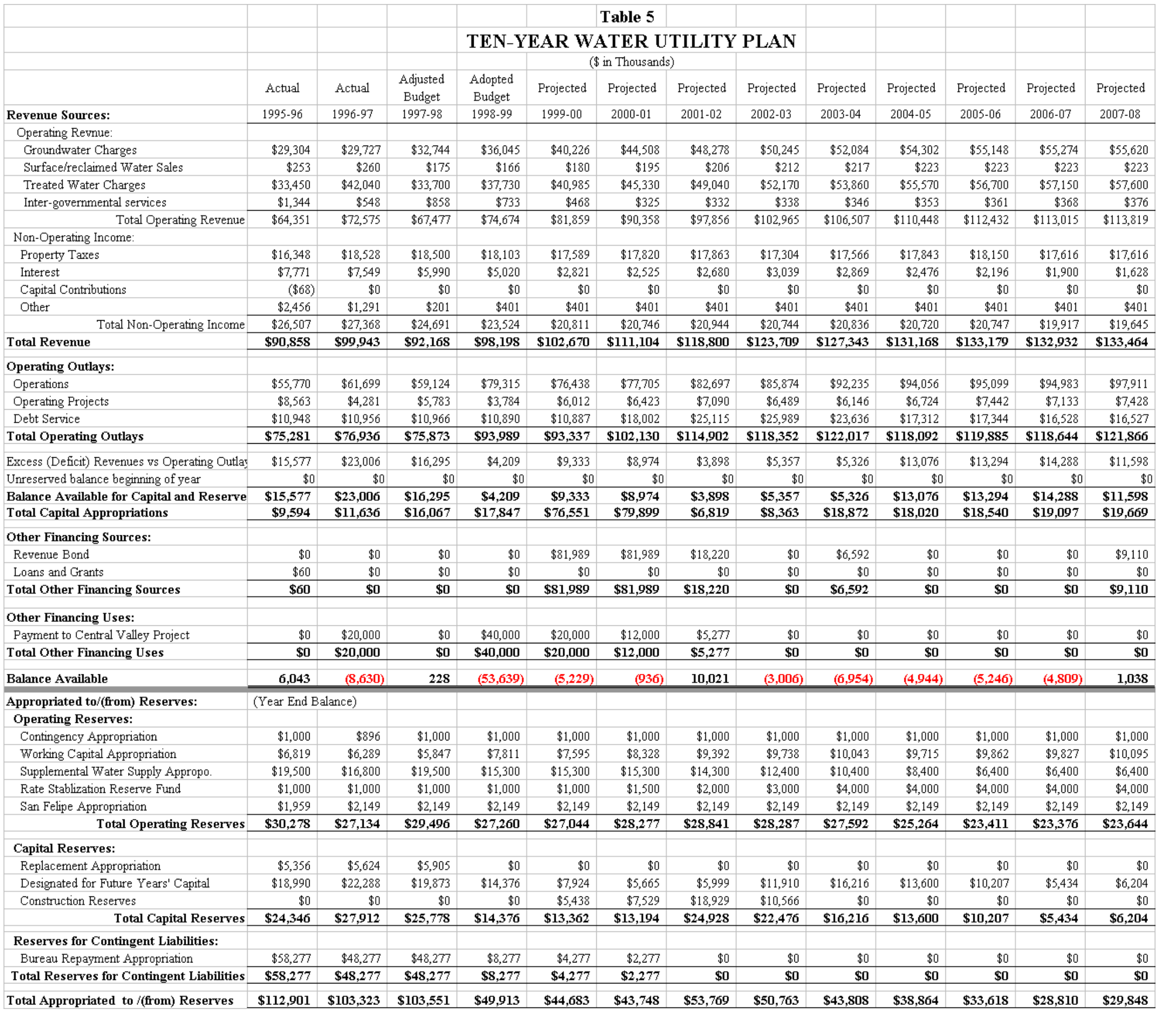


Table 5

TEN-YEAR WATER UTILITY PLAN

($ in Thousands)

	Actual	Actual	Adjusted Budget	Adopted Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Revenue Sources:	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Operating Revnue:													
Groundwater Charges	$29,304	$29,727	$32,744	$36,045	$40,226	$44,508	$48,278	$50,245	$52,084	$54,302	$55,148	$55,274	$55,620
Surface/reclaimed Water Sales	$253	$260	$175	$166	$180	$195	$206	$212	$217	$223	$223	$223	$223
Treated Water Charges	$33,450	$42,040	$33,700	$37,730	$40,985	$45,330	$49,040	$52,170	$53,860	$55,570	$56,700	$57,150	$57,600
Inter-governmental services	$1,344	$548	$858	$733	$468	$325	$332	$338	$346	$353	$361	$368	$376
Total Operating Revenue	$64,351	$72,575	$67,477	$74,674	$81,859	$90,358	$97,856	$102,965	$106,507	$110,448	$112,432	$113,015	$113,819
Non-Operating Income:													
Property Taxes	$16,348	$18,528	$18,500	$18,103	$17,589	$17,820	$17,863	$17,304	$17,566	$17,843	$18,150	$17,616	$17,616
Interest	$7,771	$7,549	$5,990	$5,020	$2,821	$2,525	$2,680	$3,039	$2,869	$2,476	$2,196	$1,900	$1,628
Capital Contributions	($68)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other	$2,456	$1,291	$201	$401	$401	$401	$401	$401	$401	$401	$401	$401	$401
Total Non-Operating Income	$26,507	$27,368	$24,691	$23,524	$20,811	$20,746	$20,944	$20,744	$20,836	$20,720	$20,747	$19,917	$19,645
Total Revenue	**$90,858**	**$99,943**	**$92,168**	**$98,198**	**$102,670**	**$111,104**	**$118,800**	**$123,709**	**$127,343**	**$131,168**	**$133,179**	**$132,932**	**$133,464**
Operating Outlays:													
Operations	$55,770	$61,699	$59,124	$79,315	$76,438	$77,705	$82,697	$85,874	$92,235	$94,056	$95,099	$94,983	$97,911
Operating Projects	$8,563	$4,281	$5,783	$3,784	$6,012	$6,423	$7,090	$6,489	$6,146	$6,724	$7,442	$7,133	$7,428
Debt Service	$10,948	$10,956	$10,966	$10,890	$10,887	$18,002	$25,115	$25,989	$23,636	$17,312	$17,344	$16,528	$16,527
Total Operating Outlays	**$75,281**	**$76,936**	**$75,873**	**$93,989**	**$93,337**	**$102,130**	**$114,902**	**$118,352**	**$122,017**	**$118,092**	**$119,885**	**$118,644**	**$121,866**
Excess (Deficit) Revenues vs Operating Outlay	$15,577	$23,006	$16,295	$4,209	$9,333	$8,974	$3,898	$5,357	$5,326	$13,076	$13,294	$14,288	$11,598
Unreserved balance beginning of year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Balance Available for Capital and Reserve	**$15,577**	**$23,006**	**$16,295**	**$4,209**	**$9,333**	**$8,974**	**$3,898**	**$5,357**	**$5,326**	**$13,076**	**$13,294**	**$14,288**	**$11,598**
Total Capital Appropriations	**$9,594**	**$11,636**	**$16,067**	**$17,847**	**$76,551**	**$79,899**	**$6,819**	**$8,363**	**$18,872**	**$18,020**	**$18,540**	**$19,097**	**$19,669**
Other Financing Sources:													
Revenue Bond	$0	$0	$0	$0	$81,989	$81,989	$18,220	$0	$6,592	$0	$0	$0	$9,110
Loans and Grants	$60	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Other Financing Sources	**$60**	**$0**	**$0**	**$0**	**$81,989**	**$81,989**	**$18,220**	**$0**	**$6,592**	**$0**	**$0**	**$0**	**$9,110**
Other Financing Uses:													
Payment to Central Valley Project	$0	$20,000	$0	$40,000	$20,000	$12,000	$5,277	$0	$0	$0	$0	$0	$0
Total Other Financing Uses	**$0**	**$20,000**	**$0**	**$40,000**	**$20,000**	**$12,000**	**$5,277**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Balance Available	**6,043**	**(8,630)**	**228**	**(53,639)**	**(5,229)**	**(936)**	**10,021**	**(3,006)**	**(6,954)**	**(4,944)**	**(5,246)**	**(4,809)**	**1,038**
Appropriated to/(from) Reserves:	(Year End Balance)												
Operating Reserves:													
Contingency Appropriation	$1,000	$896	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Working Capital Appropriation	$6,819	$6,289	$5,847	$7,811	$7,595	$8,328	$9,392	$9,738	$10,043	$9,715	$9,862	$9,827	$10,095
Supplemental Water Supply Appropo.	$19,500	$16,800	$19,500	$15,300	$15,300	$15,300	$14,300	$12,400	$10,400	$8,400	$6,400	$6,400	$6,400
Rate Stablization Reserve Fund	$1,000	$1,000	$1,000	$1,000	$1,000	$1,500	$2,000	$3,000	$4,000	$4,000	$4,000	$4,000	$4,000
San Felipe Appropriation	$1,959	$2,149	$2,149	$2,149	$2,149	$2,149	$2,149	$2,149	$2,149	$2,149	$2,149	$2,149	$2,149
Total Operating Reserves	**$30,278**	**$27,134**	**$29,496**	**$27,260**	**$27,044**	**$28,277**	**$28,841**	**$28,287**	**$27,592**	**$25,264**	**$23,411**	**$23,376**	**$23,644**
Capital Reserves:													
Replacement Appropriation	$5,356	$5,624	$5,905	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Designated for Future Years' Capital	$18,990	$22,288	$19,873	$14,376	$7,924	$5,665	$5,999	$11,910	$16,216	$13,600	$10,207	$5,434	$6,204
Construction Reserves	$0	$0	$0	$0	$5,438	$7,529	$18,929	$10,566	$0	$0	$0	$0	$0
Total Capital Reserves	**$24,346**	**$27,912**	**$25,778**	**$14,376**	**$13,362**	**$13,194**	**$24,928**	**$22,476**	**$16,216**	**$13,600**	**$10,207**	**$5,434**	**$6,204**
Reserves for Contingent Liabilities:													
Bureau Repayment Appropriation	$58,277	$48,277	$48,277	$8,277	$4,277	$2,277	$0	$0	$0	$0	$0	$0	$0
Total Reserves for Contingent Liabilities	**$58,277**	**$48,277**	**$48,277**	**$8,277**	**$4,277**	**$2,277**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Appropriated to /(from) Reserves	**$112,901**	**$103,323**	**$103,551**	**$49,913**	**$44,683**	**$43,748**	**$53,769**	**$50,763**	**$43,808**	**$38,864**	**$33,618**	**$28,810**	**$29,848**

North County (Zone W-2) Finances

Water Charge Zone W-2, North county, accounts for approximately 80 percent of District water sales, but because of higher water rates, over 95 percent of Water Utility revenue. The groundwater charges for fiscal year 1998-99, adopted by the Board on May 26,1998, are $260 per acre-foot for non-agricultural (M&I) water and $26 per acre-foot for agricultural water. After holding the rates constant for five years, the Board, for the reasons discussed above, decided that the groundwater charge for North County should be raised gradually, starting this year, to meet the anticipated higher financial requirements.

The higher rates for 1998-99 are projected to increase north county revenues by nearly 7% a shown in Table

Table 6
OVERVIEW OF NORTH COUNTY FINANCES
($ Million)

	Actual 1996-97	Estimated 1997-98	Projected 1998-99
Revenues	96.0	88.3	94.3
Costs			
Operation	53.2	51.1	60.0
Imported Water	19.7	21.0	29.8
Capital Improvements	11.6	16.1	17.8
CVP Repayment	20.0	0.0	40.0
Total Cost	104.5	88.1	147.6
Surplus (Deficit)	-8.5	0.2	-53.3
Use of Reserves	-8.5	0.2	-53.3

6. Despite the higher revenues, fiscal year 1998-99 is projected to experience a significantly higher deficit in comparison to previous years, because of cost increases for imported water and planned CVP repayments. The projection in the ten-year water utility plan (figure 3) also indicates that the expenditure in 1998-99 is just the beginning of a planned financial expansion in the next ten years.

South County (Zone W-5) Finances

Rates in the South County (Water Charge Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing the groundwater basin, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County, water rates are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and projected water charges are set to keep the cumulative balance near zero, while maintaining relative stability in South County water rates. Successive years of surplus or deficit can occur but rates are adjusted only when the trend in the cumulative surplus (deficit) shows a significant imbalance.

Current policy adds an “open space” credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural rates low. This credit is calculated annually at $2 per acre-foot of non-agricultural (M&I) water that delivered by the District and has amounted to approximately $485,000 in recent years. The District Act limits rates for agricultural water to no more than one-fourth of the rate for non-agricultural water. At the current non-agricultural rate of $108 per acre-foot in South County, the agricultural rate could be as high as $27 per acre-foot. The South County’s share of the open space credit amounts to approximately $15 per acre-foot, and has enabled agricultural rates to be maintained at $11.50 per acre-foot since 1990.   In addition to the benefits of the open space credit in each zone, agricultural rates were further reduced with Resolution 98-44 adopted by the Board on May 26, 1998. This resolution sets the agricultural rate at 10% of M&I rate and reduced the agricultural rate in the south county from $11.50 per acre-food to $10.80 per acre-foot.

Resolution 98-44 also sets the 1998-99 groundwater charge for non-agricultural (M&I) water in South County at $108 per acre-foot and the agricultural water in South County at $10.80 per acre-foot. With the adopted rates in Fiscal Year 1998-99, the South County deficit is projected to reach approximately $391,000. This would absorb most of the cumulative surplus of $576,000 that is estimated to remain at the end of 1997-98. The cumulative balance at the end of 1998-99 is estimated to be $185,000.

As shown in Table 7, South County revenues less costs resulted in a small surplus in Fiscal Year 1996-97. Estimates for Fiscal Year 1997-98 show a small deficit as a net result of a slight decrease in cost of imported water and an increase in capital costs. The additional amortization expenses are for two recently completed projects in Zone W-5:

- San Pedro Recharge Facility – total of $1.9 million
- Uvas Dam Seepage Mitigation – total of $1.1 million

Although, the actual projected quantity of imported water to South County has decreased from a average level of 12,000 acre-feet to 9,000 acre-feet, the financial projections for 1998-99 shows costs for imported water increasing, as the District plans to pay sufficient sums to eliminate the deficit balance over the next four years. The projected costs in South County are complicated by uncertainty in the use of imported water in the San Pedro facility. Successive wet years have led to high groundwater levels, which are causing problems for some property owners in South County. The District is analyzing approaches to monitoring the movement of groundwater and is planning to invest in an expanded monitoring network to better understand the underground aquifers in the South County.

Table 7
OVERVIEW OF SOUTH COUNTY FINANCES
($ Thousand)

	Actual 1996-97	Estimated 1997-98	Projected 1998-99
Revenues	3,957	3,883	3,918
Open Space Credit	494	469	485
Revenues & Credit	4,451	4,352	4,403
Costs			
Operation	2,868	2,868	3,015
Imported Water	1,204	973	1,216
Amortized Capital Improvements	327	562	562
Total Cost	4,399	4,403	4,793
Surplus (Deficit)	52	-51	-391
Cumulative Balance	627	576	185

APPENDIX A

WATER UTILITY RATE COMPONENTS AND ADOPTED RATES

TABLE A-1

ADOPTED WATER RATE COMPONENTS FOR FISCAL YEAR 1998-99

Component	Rate (AF)
Basic User, Zone W-2	
Agricultural	$26.00
Municipal and Industrial	260.00
Basic User, Zone W-5	
Agricultural	10.80
Municipal and Industrial	108.00
Treated Water Surcharge	
Contract	70.00
Noncontract	0.00
Water Master	11.75
Capital Cost	
Half Road Lateral System	2.75

TABLE A-2

ADOPTED WATER CHARGES FOR FISCAL YEAR 1998-99

Type of Charge	AG Water (AF)	M&I Water (AF)
Groundwater		
Zone W-2	$26.00	$260.00
Zone W-5	10.80	108.00
Surface Water [1]		
Evergreen Deliveries [2]	228.00	N/A
Half Road Deliveries [3]	25.30	122.50
Other Zone W-5 Deliveries [4]	22.55	119.75
Other Zone W-2 Deliveries [5]	37.75	271.75
Minimum Charge Zone W-5 [6]	81.00	81.00
Minimum Charge Zone W-2 [7]	195.00	195.00
Stored Water		
Zone W-2	26.00	260.00
Zone W-5	10.80	108.00
Treated Water [8]		
Contract	N/A	330.00
Noncontract	N/A	280.00
Recycled Water		
Gilroy	20.00	80.00

[1] Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.

[2] Evergreen agricultural delivery charges for 1992 through 1999 equal the 1988-89 rate ($72.00/AF) plus 50 percent of the City of San Jose's wheeling charge. The District no longer delivers M&I water to the Evergreen Area.

[3] Half Road = Basic User (AG or M&I @ $10.80 or $108.00) + Water Master ($11.75) + Capital ($2.75).

[4] Other Zone W-5 Deliveries = Basic User (AG or M&I @ $10.80 or $108.00) + Water Master ($11.75).

[5] Other Zone W-2 Deliveries = Basic User (AG or M&I @ $26.00 or $260.00)+ Water Master ($11.75).

[6] Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $108.00).

[7] Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $260.00).

[8] Treated Water Charge is the sum of Basic User ($260.00) and Treated Water Surcharge ($70.00/AF).

APPENDIX B

DESCRIPTION OF WATER UTILITY REVENUE SOURCES, COST CENTERS, AND RESERVES

Pricing Policy

The District's Board of Directors, adopted Resolution No. 96-82, updating the Water Utility taxing and pricing policy in November 1996. This pricing policy incorporates four concepts: (1) water pooling, (2) water facilities cost pooling, (3) water resources management and (4) revenue pooling. The complete policy follows after page B-3.

Water Charges

- Water charges include a **groundwater charge**, which is equivalent to the **basic user charge**, and is associated with the benefit of groundwater supplies. The groundwater charge is tax applied to water extracted from the groundwater basin in Zones W-2 and W-5 as shown in Appendix C. The basic user charge is applied to other types of water delivered by the District. There are two rates, one for agricultural water and one for M&I water.

- A **treated water surcharge**, which is associated with the benefit of receiving treated water, is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

Property Taxes

Ad valorem taxes provide revenue to support several benefits which are general in nature serving all, or large areas of the County. Some of these benefits are the availability of imported water to the county, recreation associated with the District's reservoirs, and replenishment of the County's groundwater subbasins.

The District receives a portion of the 1- percent countywide tax revenues as allocated by the County Assessor. Tax Zones W-3 and W-4, as well as a countywide ad valorem tax are part of the 1- percent allocation. In 1992-93, 10 percent of the Water Utility's portion of the 1- percent allocation was reallocated as part of the 1992-93 State budget. It is possible that the Water Utility will be impacted by further State reallocation of the 1- percent ad valorem tax in the future.

The District also levies additional ad valorem taxes under Article XIII A of the State Constitution to meet: (a) prior approved general obligation bond debt service in Zone W-1 (zones are shown on the map in Appendix C) and (b) part of the contractual obligations for SWP water with a Countywide tax.

Debt Financing

To fund the construction of new facilities, the District has relied on both pay-as-you-go financing and long-term debt financing from revenue bonds as authorized by the voters in 1977. The last remaining 1977 authorized revenue bonds were sold in April 1984. In January 1984, State legislation allowed the District to seek authorization to issue revenue bonds as needed following the Board of Directors' approval. County voters approved this authorization in November 1984. The District sold an additional $30 million of revenue bonds in November 1985 to provide needed funding for ongoing projects. In August 1986, the District refunded all outstanding water revenue bonds. Again, in June 1994, the District took advantage of favorable market conditions to refund the remaining 1986 water revenue bonds. The 1994 refunding totaled $65.9 million at an effective interest rate of 5.2 percent.

Water Utility Reserves

1. **Designated for Future Years Capital**: This reserve accounts for the remainder of current available funds (or deficit) and is appropriated in support of future capital needs as projected in the District's 5 year Capital Improvement Plan (CIP).

2. **Contingency Appropriations**: Set at a fixed recommended amount at the beginning of the fiscal year to provide for unforeseen needs and emergency appropriations during the year.

3. **Replacement Appropriations**: Established at recommended levels for the immediate or emergency replacement of Water Enterprise fixed assets. The prior years appropriated amounts were set at approximately 2% of the book value of the Water Enterprise Plant and Equipment. Beginning in fiscal year 1998-99 the 5-year Capital Improvement Plan (CIP) has identified needed fixed asset replacements and has eliminated the need for this reserve. The balance of any prior years appropriation have been combined with the appropriation Designated for Future Year Capital.

4. **Working Capital Reserves**: This reserve establishes available cash assets from which operating and capital expenditures are made prior to the receipt of revenues for the fiscal year. The level of the reserve is established based upon the source and timing of the expected receipt of revenues. In the Water Utility the level of reserve is set at 1/12 of budgeted operating outlays (required under Water Revenue Bond Resolution 94-58).

5. **San Felipe Appropriation**: This is a contractually stipulated operating reserve pursuant to the District's contract with the U.S. Bureau of Reclamation for the operation and maintenance of the San Felipe Division Facilities.

6. **Bureau Repayment Appropriation**: Established by Board policy to provide funding for the District's future contractual liability to the U.S. Bureau of Reclamation, Central Valley Project.

7. **Supplemental Water Supply Appropriation**: This reserve is established under Board policy to provide funding for supplemental water purchase during period of drought or participation in water banking or conservation opportunities.

8. **Rate Stabilization Reserve Fund**: Established pursuant to the District's Water Revenue Bond Covenants under Resolution 94-58. Amounts accumulated in this reserve may be used to supplement District revenues to meet Debt Service Coverage Requirements during periods of extraordinary operating expense in lieu of a rate increase.

In addition to the foregoing balances held by the District, a debt service reserve fund is held by the District's fiscal agent to meet any deficiencies that may occur in meeting the revenue bond debt service. The amount on deposit is equal to 10 percent of the proceeds from the 1994 refunding or $6,591,500.

Water Utility Zones

The major sources of water revenue are from charges levied on all groundwater extracted within Zone W-2 and Zone W-5 of the District and from the sale of approximately 110,000 acre-feet of treated water. Other water charges are made for surface water diversions and sales of recycled water in the Gilroy area. A brief description of each water zone (see Water Utility Zones map in Appendix C) within the Water Utility Enterprise follows:

> **Zone W-1** encompasses the groundwater basin in northern Santa Clara County and small peripheral areas outside the groundwater basin, with the retail service areas of privately-owned public utilities and municipal

water departments using water pumped from the groundwater basin. This area provides the security for general obligation bonds. Zone W-1 comprises an area of approximately 290 square miles and includes all or portions of 13 of the County's 15 cities, plus some unincorporated territory.

Zone W-2 encompasses the Santa Clara Valley groundwater basin north of Metcalf Road. It includes those groundwater producing facilities that benefit from recharge of the basin with local and imported water. A charge is levied for all groundwater extracted from this zone.

Zone W-3 encompasses the Coyote and Llagas groundwater basins in the area from Metcalf Road in the north to just south of the City of Morgan Hill. Part of the County property tax within the 1 percent limit is allocated to this zone.

Zone W-4 contains all of Zone W-2 and lands outside Zone W-2 that use or otherwise benefit from locally conserved water and from the importation and distribution of water from the South Bay Aqueduct. This area also receives an allocation of County taxes. These tax revenues are used to pay for the cost of water, recovery of accumulated overdrafts, control of land surface subsidence, and to sustain the emergency supply of water.

Zone W-5 is comprised of the entire groundwater basin from Metcalf Road south to the Pajaro River. Charges are levied for all groundwater extracted from this zone.

Zone W-6 represents the old Gavilan Water Conservation District and is within Zone W-5.

Water Utility Cost Centers

Source of Supply Cost Center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all District conservation, recycling, and importation costs.

Raw Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.

Water Treatment Cost Center contains all expenditures associated with the treatment of water at the Rinconada Water Treatment Plant, Penitencia Water Treatment Plant, and Santa Teresa Water Treatment Plant.

Treated Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.

Administration and General Cost Center contains all expenditures of an administrative nature, which are not assigned to one of the other four cost centers. Work performed in this cost center covers items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water quality management, and resource planning.

Water Utility Taxing and Pricing Policy

APPENDIX C

MAPS

WATER UTILITY FACILITIES

WATER UTILITY ZONES

GROUNDWATER SUBBASINS AND MAJOR RECHARGE SYSTEM

APPENDIX C

MAPS

DETAIL TABLE OF WATER SUPPLY, DISTRIBUTION, PRODUCITON, AND USE